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### **Citation for published version:**

Ross, H 2011, *Sustaining the Impact: exploring the outcomes of Professional Recognition of Scottish teachers for Sustainable Development Education*. University of Edinburgh, Edinburgh.

### **Link:**

[Link to publication record in Edinburgh Research Explorer](#)

### **Document Version:**

Publisher's PDF, also known as Version of record

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Research Report - December 2011

# SUSTAINING THE IMPACT

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Exploring the outcomes of Professional Recognition of Scottish  
Teachers for Sustainable Development Education

Report prepared by Dr Hamish Ross, The University of  
Edinburgh

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General Teaching Council for Scotland  
WWF Scotland

**Sustaining the Impact: Exploring Professional Recognition for  
Scottish Teachers of Sustainable Development Education**

Dr Hamish Ross  
University of Edinburgh



December 2011

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## Acknowledgements

The University of Edinburgh, General Teaching Council for Scotland, and WWF Scotland, thank all the teachers who consented to the examination of their application forms and to all those who gave their time to attend focus groups or interviews.

## List of Abbreviations

ASN	Additional Support Needs
DofE	Duke of Edinburgh (Award Scheme)
GTCS	General Teaching Council for Scotland
LA	Local Authority
PBL	Problem Based Learning
PR	Professional Recognition
SD	Sustainable Development
SDE	Sustainable Development Education

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## Executive Summary

This study explored the outcomes of the recently established system for the Professional Recognition (PR) of work in sustainable development education (SDE).

The professional body for Scottish teachers, the General Teaching Council for Scotland (GTCS), awards PR to teachers who apply for it with supporting evidence. The application process focuses professional learning in particular fields, such as SDE.

In this study twenty-two application forms were analysed and 8 teachers who had been successful in obtaining PR were spoken to in small groups or individually. In this summary, the latter are referred to as 'interviewed teachers'.

The study focused on teachers' engagement with PR, on the characteristics of those teachers, on their SDE practices, and on how these might have affected their pupils' attitudes and behaviours.

### Teachers' engagement with professional recognition

Applying for PR revealed to applicants how much they had achieved in SDE, personally and professionally, and this was satisfying.

However the availability, purposes and 'uses' of PR had not been widely recognized or developed by the profession or school managers. Few of the interviewed teachers' professional colleagues knew they had been awarded PR.

Experience of the profession's early engagement with PR could be used to fine-tune the concept and the application process, before re-advertising it to teachers and school managers.

A revised PR model might explain the links between professional learning, individual achievement, and benefits for schools and for the profession.

This study suggests that the relationship between professional learning and professional networks could be central to such a model.

The study also suggests that it might be helpful to identify in more detail the specific attributes to which PR attests in the different areas for which it is available.

### The characteristics, pedagogies and practices of recognized teachers

Some GTCS accounts of PR connect it to a concept of the transformative or activist teacher. This seems especially pertinent for SDE, because societal change is one objective of SDE.

Also, the influence to spread effective pedagogies might be central to the purposes of a PR system that benefits the wider profession.

Most of the practices identified were in the whole-school mould of *Eco-Schools*, which had been influential in many of the applications for PR.

The recognized teachers used SDE practices that were well established by other research as being 'effective'.

There was an apparent difference in the frequency of school grounds infrastructure projects (common) and school buildings infrastructure projects (less common).

Most SDE practices did not extend beyond the school (and parent/carer) community.

The teachers themselves were typically very influential in their local authority and at least some of them were more widely influential.

Only a few interviewed teachers' personal commitments to sustainable development (SD) were related to the detail of their SDE practice.

The teachers were highly motivated and skilled leaders of SDE in their schools.

However, that leadership was sophisticated and 'light touch' in ways that confounded attempts to link the interviewed teachers' reflections or enthusiasm with SDE activity in any simple way. This is worthy of further research.

Teachers who applied for PR demonstrated significant amounts of formal professional study.

However a fine-tuned application process (see above) might also highlight learning through professional networks, informal contacts and the Internet.

### **Pupil outcomes and how they are known**

Teacher education in Scotland, including through PR, is increasingly expected to attend to its effects on pupils.

The intended outcomes of the interviewed teachers' SDE projects were not exclusively, or even principally, about SD. Any such intended outcomes were mixed with a wide range of other purposes.

This mixing of outcomes might have reduced teachers' focus on the evaluation of SDE-specific outcomes, including about pupils' attitudes.

However, formal monitoring of SDE behaviour was a common practice, particularly in school and at home.

Interviewed teachers often evaluated 'pupil attitudes' outcomes through changes to the school or home environment through pupils' collective behaviour.

They also argued that the evangelism, enthusiasm and self-direction of pupils, and the content of pupil-initiated discussions, in relation to SDE projects, showed that their attitudes were being affected by SDE pedagogies.

However, they were uncertain about how long lasting were such effects, and therefore about how 'deeply' SDE pedagogies influenced pupils.

### Recommendations

The study identified some possible recommendations for the development of PR and for further research. The study recommends that the GTCS:

1. Fine-tunes and re-circulates the concept of PR (and the application process) to highlight for teachers and managers the relationships between professional learning, the benefits for schools, and the benefits for the wider profession. It is possible that the relationship between professional networks and professional learning would be central to this. However this could be investigated further with those in the profession – particularly school managers – who are beginning to engage with the potential of PR.
2. Details the specific attributes to which PR for an area attests. In the case of the SDE area, for example, the leadership of whole-school initiatives was such an attribute. But that leadership was of a specific and complex kind. It would be worth researching whether there are differences between this kind of 'leadership' and the 'leadership' shown by teachers who have been awarded PR in other areas. This information might improve the value of PR to schools and the profession.
3. Considers the ways in which groups of teachers who have achieved PR in an area (such as SDE) can be encouraged, as a group, to innovate and influence the field.
4. Considers the potential research base that this group of teachers represents, possibly as teacher-researchers. They have significant influence and commitment, lead major SDE practices, and have already articulated their work in order to apply for PR.

More generally, the study recommends further research in the area of SDE, possibly involving these teachers, which:

5. Explores more precisely how the leadership of whole school SDE works. Previous research has established that committed leaders have been central to school SDE, but there is scope to research the nature of that leadership. There is also benefit in doing so, and *WWF Scotland* and *WWF UK* have existing research interests in this area.
6. Explores the reasons for a higher frequency of school grounds infrastructure projects (such as raised beds) over school buildings infrastructure projects (such as solar panels).
7. Explores the ways in which SDE-specific and 'deeper' pupil outcomes of SDE are combined with other purposes, and the effects that this has on the monitoring and evaluation of those outcomes.



## Background

The research reported here concerns General Teaching Council for Scotland (GTCS) professional recognition (PR) of 35 Scottish teachers for their work in the field of sustainable development education (SDE).

The research was funded by the GTCS and WWF Scotland. The GTCS is the independent professional regulatory body that maintains and enhances teaching standards in Scotland.<sup>1</sup> WWF Scotland is part of the international WWF network, one of the world's most influential environmental organisations.<sup>2</sup>

### Professional recognition as policy

According to the GTCS, PR both facilitates and rewards established teachers' professional development.<sup>3</sup> It *facilitates* by providing an application process that focuses the teacher's professional development activities on a defined area of professional knowledge, understanding or skills (such as SDE) (a copy of the PR application form is appended to this report). And it *rewards* by providing an independent, national, quality-assured standard of recognition of the resulting expertise.

Professional recognition is currently available for subject curriculum areas, and for cross-curricular areas, including: ASN (Autism), ASN (Dyslexia), ASN (Hearing and / or Visual Impairment), Assessment, Enterprise Education, Health Promotion, ICT, Literacy, Numeracy, SDE, Global Citizenship Education, and others.

Such PR, which goes beyond basic accreditation-to-teach, is a growing policy area in a range of countries (e.g. Ingvarson, 2010). One interpretation of this growth is that it is part of a widespread impetus to 'modernize' teaching workforces to ensure the on-going fitness of national education systems in new, global, and rapidly changing economic, social and environmental conditions (e.g. Beck, 2010; Collinson et al., 2009).

The GTCS has recently become autonomous in relation to the Scottish Government (HMSO, 2011). So it is interesting that it also offers a view of the transformative purposes of PR. Key staff have used Judyth Sachs' (2003) concept of 'The Activist Teaching Professional' as a basis for describing the purposes of the PR system within a politics of transformation. Such transformation, they argue, should be understood to be concerned with social justice and equity (Murray and Hamilton, 2009).

The wider policy of teacher modernization in Scotland has been articulated most recently by the Donaldson Review of Teacher Education (Donaldson, 2010). This

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<sup>1</sup> <http://www.gtcs.org.uk/home/home.aspx>, accessed 17 April 2011

<sup>2</sup> [http://scotland.wwf.org.uk/what\\_we\\_do/about\\_wwf\\_scotland/](http://scotland.wwf.org.uk/what_we_do/about_wwf_scotland/), accessed 17 April 2011

<sup>3</sup> <http://www.gtcs.org.uk/professional-development/professional-recognition.aspx>, accessed 17 April 2011

highlighted the need for the reinvigoration of ‘professionalism’ and a framework of standards to promote ‘professional capacity’ over a teaching career (i.e. beyond the single hurdle of initial teacher education that currently permits access to the profession at the start of a teaching career).

### Professional recognition, SDE and pupil outcomes

The Donaldson Review also recommended that the teacher education infrastructure should examine the relationship between practice/innovation and impact on *pupil* learning and outcomes. It recognized that a teacher education policy structure – such as PR – should pay regard to the resulting outcomes for society.

The relationship between teaching practice and pupil outcomes has always been a matter of importance in the area of SDE. Numerous studies have attempted to explore the cognitive, social, affective (beliefs and attitudes) and behavioural effects upon learners of a range of environmental education or SDE practices (e.g. Ballantyne and Packer, 2005; Short, 2010; Birdsall, 2010).

WWF-UK have recently contributed to this literature (Jackson, n.d; Ofsted, 2009; Gayford, 2009; WWF-UK, 2010). Some of this contribution is based on a longitudinal study of 14 schools, visited three times between September 2005 and December 2008, which included discussions with pupils. That study included the key finding that:

The knowledge and understanding that the pupils gained at school contributed to their leading more sustainable lives at home which, in turn, led their families to re-examine their lifestyles and use of resources. (Ofsted, 2009)

However in a related study involving some of the same schools it was noted that while effective practitioners of SDE periodically evaluated *their teaching*, they were less likely to evaluate the outcomes on learners’ values and attitudes (WWF-UK, 2010). As result, a combined recommendation for professional development was that:

means of evaluating the impact of activities on pupils’ values and attitudes [should be] built into learning and teaching programmes from the beginning so that practitioners are able to assess and evaluate effectiveness, and continually improve their practice (WWF-UK, 2010)

However it should be noted that WWF UK have recently started supporting a position in which general sets of ‘values’ are more critical than specifically ‘environmental’ values or attitudes (PIRC, 2011). Therefore, while this study asked interviewed teachers about ‘outcomes’ for pupils from SDE, there might be ‘values work’ in their wider practices that would also be relevant to sustainable development outcomes.

## Research Focus

A number of questions about PR for SDE emerge from this background. The different interests of the GTCS and *WWF Scotland*, who funded the research, were included in the overall research question:

What are the outcomes of ‘professional recognition for SDE’?

This was broken down into a range of sub-questions that were used to guide the development of the project:

1. What are the effects on teachers of applying for and receiving PR?
2. How do professionally recognized teachers reflect on practice and learning, and are they continuing to do so?
3. Are professionally recognized teachers participating in the development of an activist or transforming profession?
4. For what kinds of practices have teachers of SDE been professionally recognized and are they still practicing or innovating them?
5. Have the pedagogies been spread within/beyond their institutions by the teachers who applied for Professional Recognition?
6. How do professionally recognized teachers evaluate the effects of their practice on pupils’ attitudes and behaviours?

However the project was exploratory and guided by the data that was encountered.

## Methods and Data

The study drew on two data sources:

- A sample (22/35) of the application forms of teachers who applied for PR in the area of SDE (the application form is appended to this report)
- Focus groups or interviews with a sample of 8/35 teachers who had been recognized in the area of SDE, each lasting 45-80 minutes.

These sources of data were helpful in different ways: (1) the application form data contained very little evidence for some areas of interest (especially about PR itself or about pupil outcomes); (2) despite this, the application process is one means by which the GTCS might change the PR system, so it is of interest in itself; (3) for some areas the two sources of data provided different windows on the same matters, either reinforcing or undermining each other, which heightens the validity of what is ultimately claimed in this report; and (4) while application forms allowed some quantification across the 22 applicants, the focus groups/interviews provided a more detailed understanding.

**Figure 1 Project timeline and development (April 2011-November 2011)**

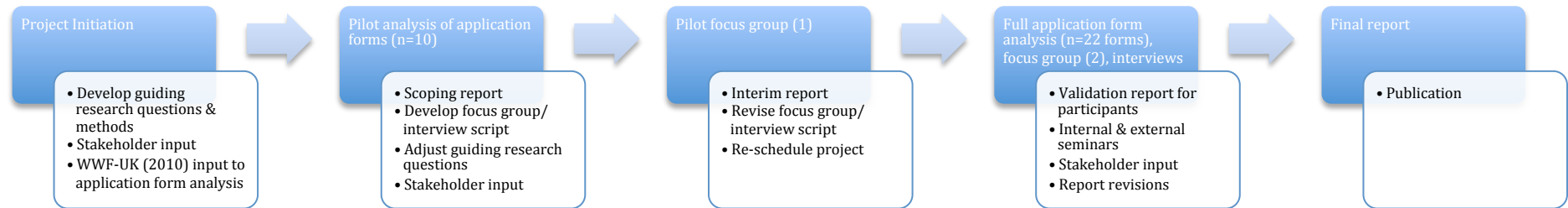
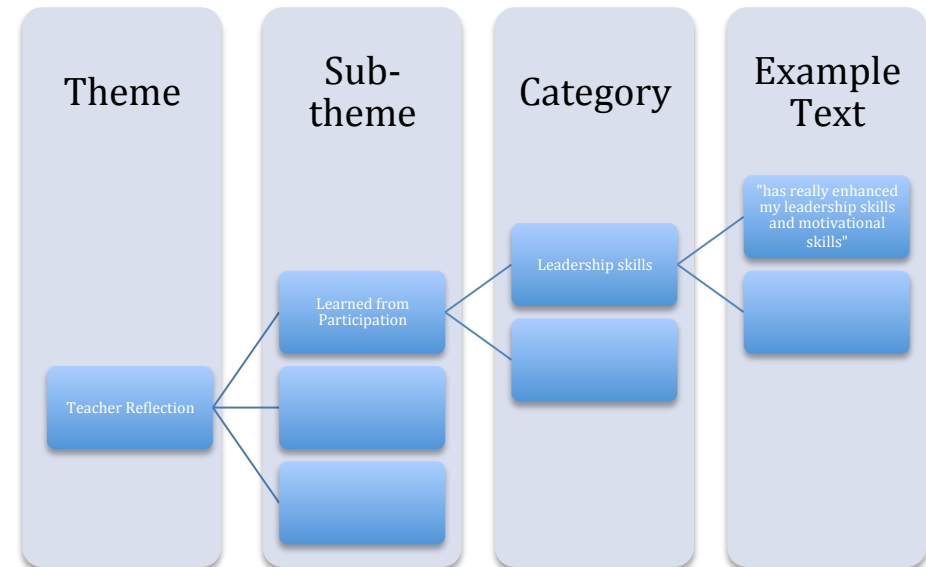


Figure 1 shows the project timeline and the iterative development of the enquiry, including the piloting of the analyses of both the application forms and the focus groups.

For both the application forms and the focus groups/interviews an iterative thematic analysis was undertaken. The intention was to organize the material into categories (sometimes referred to as codes), organized by theme or sub-theme. The relationship between these is shown in Figure 2. There is much interpretation involved in such an analysis. The intention was to be systematic and comprehensive, rather than objective.

WWF-UK (2010) 'effective pedagogies' were used as 'start list' of pedagogy categories in the analysis of application forms, though the list of categories was expanded through the analysis (Miles and Huberman, 1994).

**Figure 2 Example of relationships between application form or focus group/interview text and analytical categories and themes**



Tables 1 & 2 show summary information about the data sources.

**Table 1 Summary of data used in the project**

Application forms (submitted March 2008 - December 2010)	<ul style="list-style-type: none"> <li>•Total population = 35</li> <li>•Sample size = 22 = all who provided consent</li> <li>•Pilot analysis sample size = 10</li> </ul>
Focus Groups	<ul style="list-style-type: none"> <li>•3 teachers &amp; 1 GTCS, Edinburgh, 19/5/2011</li> <li>•2 teachers &amp; 1 GTCS, Edinburgh, 12/9/2011</li> </ul>
Interviews	<ul style="list-style-type: none"> <li>•1 teacher, rural Central Belt, 15/09/2011</li> <li>•1 teacher, rural Aberdeenshire, 28/09/2011</li> <li>•1 teacher, rural Highland, 3/10/2011</li> </ul>

**Table 2 Summary of participants involved in focus groups/interviews**

Code	Gender	School Stage	Current Role	School roll**	Rural, urban or mixed	Interview or Focus Group
A	F	Primary	Teacher	110	Rural	FG (1)
B	F	Primary	Teacher	130	Mixed	FG (1)
C	F	Secondary	Teacher	1600	Urban	FG (1)
D	F	Primary	Head Teacher*	510	Urban	FG (2)
E	F	Primary	Retired*	300	Urban	FG (2)
F	F	Primary	Teacher	120	Rural/Mixed	Interview
G	F	Primary	Head Teacher*	430	Rural	Interview
H	F	Primary	Teacher	< 5	Rural	Interview

\* Moved since application (school information refers to school referred to in application for PR); \*\* School roll figures are approximate and exclude nursery

There are likely to be systemic biases in this sample of interview/focus group teachers, which are of pertinence to any claims that the study can make. In particular: the teachers who were interviewed individually tended to be in the most rural schools; and the teachers who volunteered to participate in interviews and focus groups (a minority of the relevant population) are self-selecting. There was no reason to assume that their views and experiences were representative of other teachers who had been awarded PR (and whose application forms had been analysed and found to be in many ways similar).

## Findings about professional recognition

The project was interested in teachers' experience of the recognition process and of being recognized. The application forms revealed no systematic information about this. Participants in focus groups/interviews were asked about their experience of applying for recognition, how they heard about it, why they applied, and what they thought were the purposes of PR.

### Reflection caused by the application process

The recognition system is an application process and its stated purpose is to focus a teacher's professional learning in a given area, such as SDE.

Most of the focus group/interview participants said that **the application process helped them realise how much work they had done in SDE, how far they (and their school) had come, and what skills and knowledge they had developed.**

I quite liked doing it retrospectively because it would give you time to sit back and reflect and think – when they sent it through you thought 'surely not, this is just me doing my job'. But you sat back and reflected and thought of all the things you'd done, and the meetings you'd had with people, and having to sell it to people, and planning, and involve the children. And you suddenly thought, well, yeah, that is actually quite a lot that I've done.

Primary School Teacher (A)

A few said that applying had a feed-forward effect in helping them think about what they could do next in SDE. Others said that the application process: was good for pulling together a wide range of individual projects into something coherent; that this 'packaging' made their material more transferable from one school to another; increased a sense of ownership of the school's SDE activities; helped them to realize how wide a range of professional activity could count as professional development (such as meetings with external experts).

More than one participant recognized that their leadership skills, and knowledge, had developed, and that this mattered:

It made me a wee bit more I guess bolder – to go out and do things with the staff, or suggest things. Because I had realised that I had come from me doing it with my class to it being a whole school effort and that I wasn't directing as much... It gave me more courage to go out and lead things... I was competent to lead those discussions.

Primary School Teacher (F)

### The purposes and functions of recognition

Whatever these effects of the application process, the focus group/interview participants were asked why they applied, what they hoped to achieve by doing so, and what PR had done for them.

**The GTCS account of PR had not communicated its purposes and rationale strongly.** Most of the participants in focus groups/interviews had applied for recognition under the encouragement of someone else – a head teacher, local authority manager or colleague. Nearly all had been made aware of it initially by *Eco-Schools'* efforts to publicize it to *Eco-Schools* coordinators in schools. According to one, *Eco-Schools* thought the publicity attending recognition would be good for the movement.

Militating against this encouragement was the prospect of the significant effort involved in applying and gathering evidence to support the application. Some were encouraged by the fact that the evidence had to be put together anyway for other purposes, such as their school's next Green Flag assessment or for a Chartered Teacher submission.

**Nearly all the participants in focus groups/interviews said that virtually no one in their school was really aware that they had been recognized by the GTCS for their expertise in the field.** This fact was in part put down to modesty and by the view that there were other, equally deserving, teachers of their acquaintance. One teacher felt slightly fraudulent about her PR, in that respect. The hierarchies and cultures of Scottish education are often posited as explanations for this kind low-key approach to celebrating achievement<sup>4</sup> and these were playfully invoked.

However, a more general explanation for the tendency to under-recognize their professional recognition was uncertainty over what were the significance or purposes of PR. It seemed probable that teachers would alert their colleagues to their achievement of PR if there were something to be achieved by so doing.

**Those who went to the Scottish Parliament to have their recognition celebrated really appreciated that event.** Those who simply received a certificate in the post were less impressed, though a few noticed with appreciation that it had been published in the GTCS magazine. Everybody experienced some sense of feeling good about her recognition. But nobody was sure what it meant beyond that satisfaction or what, if anything, they should do about it.<sup>5</sup>

The interviewed teachers were generally committed to professional learning in a way that suggested significant commitment to their vocation. However, when asked to discuss the purposes of PR, they also suggested that it provided extra information in the case of job or promotion application. They thought that **PR demonstrated various attributes on a CV**. These included: a general sense

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<sup>4</sup> A recent conference about Chartered Teachers raised these kinds of issues. See <http://www.tes.co.uk/article.aspx?storycode=6118756>, accessed 24 October 2011

<sup>5</sup> It is perhaps worth adding that these focus group/interview teachers were perhaps the most interested in PR as a concept, at least as suggested by their willingness to attend a focus group/interview.

that the recognized teacher was prepared to “go the extra mile”; that they were able to *lead whole school* initiatives; that they could organize cross-curricular activity; and that their self evaluation and monitoring abilities were strong. These characteristics probably outweighed the fact that it also suggested expertise and skills in a particular field (SDE in this case), but that was also relevant. Indeed, **a few of the participants were applying for other areas of PR or intended to encourage their colleagues or staff to do so.**

If these characteristics were meaningful in the job market or promotion system, presumably they were relevant in schools in general. Indeed, **there was some suggestion that PR could have more immediate effects within schools.** Two participants in focus groups/interviews thought that GTCS recognition lent importance to the subject area (SDE) in the school and classroom. One suggested that, since her recognition, the SDE area had appeared more strongly in the school development plan, and that she was heading up these areas. Even the process of applying, which involved discussions with line managers, raised the profile of the area in the school:

Going for recognition has given school management a big awareness of what has changed, and what has improved, in the school. In this area - the environmental/sustainable development area.

Primary school teacher (F)

This suggested that PR could be ‘used’ in schools, beyond the processes of recruitment and promotion, as long as school managers recognized its potential value in signaling management and development possibilities in their schools.

The research also attempted to raise the value of PR beyond the recognized professionals’ own contexts, by asking whether there might be merit in bringing together recognized teachers in the area of SDE. Although they recognized that everyone was busy, those who felt their recognition involved an on-going commitment to the field of SDE (as opposed to those who had, or intended, to move on to other fields or promoted posts) favoured the networking value of such meetings. One participant had thought that a pool of profession-wide expertise would be the point of PR:

I would have thought there would be more focus groups, more kind of, we would have been used in some way, to put the message across. You are the first person since I got it in 2010 [to raise it...] I would have thought the purpose would be to build up a bank of expertise that could then be used in – either to go and support a school who wanted to start, with ideas...

Primary school teacher (H)

The overall sense, then, was that these participating, recognized teachers, and some of their line-managers, were just beginning to explore the possibilities of the recognition system. Their early thoughts on the matter could be used by the GTCS to direct and accelerate the development of PR in the profession.



## Findings about teachers' practices

### Teachers' pedagogies and practices

Most of the applications were based on the teachers' role as school coordinator for *Eco-Schools*. Therefore most of the pedagogies discussed were whole school practices in that mould. A model application form had been circulated and had influenced the text of many of the application forms.

The range of pedagogies and practices mentioned in the application forms showed **considerable overlap with the effective SDE pedagogies identified by WWF-UK (2010)**, as can be seen in Table 3. Although the WWF-UK (2010) pedagogies were an input to the analysis, the analysis was very open to modifying and supplementing this 'start list'. Indeed some new and modified categories appear on the table.<sup>6</sup>

There was a **high frequency of school grounds infrastructure development projects compared to other school infrastructure projects**. In both application forms and interviews/focus groups, school grounds development work was often discussed. However funded, there was usually some involvement of pupils. Pupils initiated ideas, were consulted upon them, or were directly involved in construction. In contrast, the installation of wind turbines, solar panels or heating systems did not feature in any of the application forms as an outcome (although the future investigation of such items appeared to be a feature of the model *Eco-Schools* application form). It might be worth exploring reasons for this difference in future research.

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<sup>6</sup> In addition differences in the detail of the source texts, and the methods, of WWF-UK (2010) and the present analysis probably affected the top and the bottom of Table 1. At the top of Table 3, some basic assumptions were here made about the pedagogies associated with *Eco-Schools*. Since there were 18 applications involving *Eco-Schools* the high cluster at the top of the table is in part due to these categories being automatically applied to those applications. The basic pedagogies at the bottom of the table (*meaningful reflection, creative arts, range of stimulus* and *role-play*) might have been taken for granted by applicants, or considered not sufficiently SDE-specific to mention, and therefore do not show up in the application forms. Moreover, the application form (and especially the influential *Eco-Schools* model) tended away from the detail of what happens inside classrooms and focused more on whole school initiatives.

**Table 3 Number of Applications (/22) that mention a pedagogy or practice at least once**

(Categories also used by WWF-UK (2010) are so identified, with the exceptions of: WWF-UK's category "involving parent/carers or the community" which was combined with *Pupil participation (school/community)*, whereas *Parent/carer involvement* is separately identified; WWF-UK's "Pupils presenting their findings more widely" has been divided into *Pupils sharing... (in school)* and *Pupils sharing... (beyond school)*, where 'schools' includes the parent/carer community; and WWF-UK's 'using school grounds' here includes the development of school grounds themselves).

Pupil participation (school/community)	20	WWF-UK, 2010
Special projects	19	WWF-UK, 2010
Pupil research & responsibility	19	WWF-UK, 2010
Exploring action	19	WWF-UK, 2010
Pupils sharing more widely (in-school)	19	WWF-UK, 2010 (modified)
Group, collaborative or peer learning	18	WWF-UK, 2010
Enquiry or PBL approaches	18	WWF-UK, 2010
Eco-School and Green Flag	18	
School grounds use or development	11	WWF-UK, 2010 (modified)
Parent/carer involvement	11	
<i>Development</i> of other curriculum areas	10	WWF-UK, 2010
Curriculum time is set aside	7	WWF-UK, 2010
Pupils sharing (beyond school)	7	WWF-UK, 2010 (modified)
Using natural materials & environments	7	
<i>Identification</i> of curriculum links/audit	6	
External experts in school	6	WWF-UK, 2010
School links or local-global connections	6	WWF-UK, 2010
School cluster work	6	
Growing food or plants	5	WWF-UK, 2010
Visits out of the school	5	
Community involvement	5	
Cross class/subject/stage work	4	WWF-UK, 2010
Creative arts	2	WWF-UK, 2010
Meaningful reflection	2	WWF-UK, 2010
School infrastructure (excl. grounds)	1	
Wide range of stimulus	0	WWF-UK, 2010
Role-play for perspectives	0	WWF-UK, 2010

There were **differences in the extent to which pedagogies crossed the boundary of the school community in the application form data**. A high frequency of applicants deployed pedagogies that involved the school community (including parents/carers). Many fewer reported involving other local schools, the school cluster, visits to the school by outsiders, or visit by pupils to outside institutions, or (non-parent/carer) community involvement.

Yet nearly all of the interview and focus group participants discussed practices that extended to the involvement of such wider communities. For example, one participant discussed how her primary school became interested in plastic bags, investigated their use with the help of the local supermarket, developed an alternative cotton bag, sold many hundreds of them throughout the community, recorded a resulting decline in plastic bag use at the supermarket, and won a UK-wide award for the project.

This crossing of the school boundary seems significant if PR is to be related to the spread of pedagogies through the influence of recognized teachers, or to

ideas of a transformative profession. Since the interviews/focus groups captured it more than the application forms, a fine-tuned model of the PR application process might examine this distinction.

### Teachers' reflections on practice (application form data)

The study was interested in the extent to which reflection upon practice influenced the teachers' on-going practice, because PR is about professional learning and development set within a policy context that increasingly demands that the benefits for pupils be identified.

The analysis of *application forms* focused on: reflection upon, learning from, and sources of development of, applicants' practices.<sup>7</sup>

**It was noteworthy that so few applicants *explicitly articulated* the outcomes of their professional engagement with learning.** Most (14/22) applicants said that reflection upon previous pedagogical practice had resulted in revised or updated work. But just under half of the applications made reference to explicit future plans.<sup>8</sup> Although continuing commitment to *Eco-Schools* requires new and developed activity only 6/18 applications included an explicit commitment to obtaining a subsequent *Eco-Schools* flag. A minority (5/22) explained that specific reading or learning experiences had informed their current practice in SDE<sup>9</sup> and fewer than half (9/22) said they learned something *personally* from their practice itself (e.g. knowledge and understanding, or leadership skills).

It is doubtful that the application forms provide a useful window on the *outcomes* of applicants' learning – of what arose from the many hundreds of hours of CPD courses that were recorded for example. Learning must surely have informed practice, and possibly pupil outcomes. Yet the gross analysis of application forms revealed relatively little.

### Teachers' reflections on practice (focus groups/interview data)

Focus group/interview data was more helpful for understanding how teachers reflected upon and developed their practice, though it was a complex picture. It was striking that **focus group/interview participants said they exercised a light touch upon SDE project evolution**, so the relationship between personal reflection and practice development seemed to be downplayed or under-articulated.

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<sup>7</sup> This was treated as distinct from the reflection implicit in the structure of the application form (involving developmental conversations with line-managers and agreed actions), which referred beyond the applicants' practice to their wider professional learning (see earlier in the report). The application form analysis also discounted significant quantities of text from the *Eco-Schools* model application because there was no way of knowing whether its inclusion in an individual application indicated the supposed reflection and action.

<sup>8</sup> If the relevant parts of the standard *Eco-Schools* model text were included, this figure would rise dramatically.

<sup>9</sup> Learning from prior *practice* was excluded from this count.

However a **picture of subtle and sophisticated SDE leadership emerged that would not be easily described by a model of the professional as an autonomous agent engaged in action-reflection-action cycles.** Four aspects arose in focus groups/interviews that pertained to how pedagogies developed and the role of the teacher in that development:

- Change was often initiated, energized and directed by pupils
- Wider exigencies provided an on-going impetus for change
- External institutions provided an on-going impetus for change
- The teacher was one of many sources of new ideas/projects

It was hard to break down any given discussion into the above four areas. Focus group/interview participants were pressed on the question of how new areas of SDE development arose or developed in their schools, and what were their own roles and thinking in those. Here is an example of a response:

Off their own bat [the pupils] went and put notices up beside the paper towel dispensers, because they started – [pause] – I got compost bins put into the school because we didn't have any, and a whole range of – now – recycling bins. Well the children met with the recycling officer and worked out what sort of bins we needed. It's standard now throughout the school... They<sup>10</sup> noticed – *they* noticed – how many paper towels they were throwing out into the compost bin. And they came and said 'can we put notices up – 'people should only use two maximum'

Primary School Head Teacher (G)

Other participants in focus groups/interviews, including from large, urban primary schools, were clear that the children often decided where projects were to go next, and the teacher then had to think about how that could be facilitated.

On the other hand, there were also cases where the teacher would 'drip feed ideas' or 'plant seeds', for example with a view to shifting the pupils' attention to Fair Trade.

Regardless of how changes in direction were brought about, the *impetus* to change, move on, and develop, came from a range of sources. As above, pupils were a significant source of this impetus. Also, *Eco-Schools* in particular insisted upon constant development in order to obtain and retain 'Green Flag' status. New areas were suggested for the school each time it was assessed. In the case of one very rural primary school, the teacher said that recycling (in the entire local community) was now so ingrained because of the school's work that there was no need for further awareness raising – everyone brought all their recycling to the school already – so that new angles on *Eco-Schools'* waste minimization area needed to be found.

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<sup>10</sup> 'They' – the 7 or 8 children who are on the Eco Group (all the children in the school are on one kind of whole school group or another)

Also teachers caused changes by adjusting the depth and detail of aspects of projects to suit the age and abilities of the pupils who would be involved, and the elements of the official curriculum that needed to be covered. They also described the impetus to *spread* ideas that were going well, particularly down the school age range:

It started off with upper school children who then spread it down and it's been over years that it's now fully embedded in the school. But it wasn't just everybody altogether it was something that took time to get all the little ones on board as well.

Primary School Head Teacher (D)

There were cases where direct teacher reflection on evidence lead to changes in practice, and it was possible that this was more common in practice than appeared from the data in this project. In this example (a different case of spreading the initiative down the school), teacher reflection seemed important but the pupil energy was affective too :

Some of the parent/carers were telling me that the students were coming home and telling their little brothers and sisters [about a local beach project] and that's when we adapted our project to work with the Primary-Ones.

Primary School Teacher (B)

In general, the need to keep moving, and the direction of movement, came from a range of sources, but certainly not just the teacher. The teachers' reflections on pedagogy and activity – their merits or weaknesses – were only one part of a complex process.

Moreover, in some cases there was a sense that the pupils' energies were important in achieving objectives that the teacher hoped for. Teachers talked of 'planting seeds' and of the merits of the pupils 'selling' new projects to others.

The focus group/interview participants found it difficult to pin down where such 'seeds' came from (if not from pupils). Some attributed new ideas – such as the construction of a bottle greenhouse – to having seen them in others schools. Two seemed to connect new ideas to their own personal commitments, for example one was buying Fair Trade foods in the supermarket and felt it was appropriate to find an external speaker on the subject for a school assembly. Others said that environmental things 'pop into my head all the time', or mentioned that their own parents or childhood had been 'green'. On other occasions school parents/carers made suggestions – one had said that he had a pile of shipping pallets, had read in a magazine that it was possible to make a 'biodiversity tower' out of them, and offered them to the school for this purpose. And statutory (e.g. Cairngorms National Park Authority) and non-statutory (e.g. Transition Towns) community stakeholders might consult with pupils and teachers in ways that would lead to new ideas. These were not always straightforward. For example while this teacher was thinking about sowing the

seeds of Fair Trade, local community activists were focused on radical relocalisation:

People were talking about local produce being better than buying from further afield but we were trying to say 'what about Fair Trade?' and they [Fair Trade products] were coming from all over the world. So it was a good debate.

Primary School Head Teacher (D)

In attempting to uncover how reflection on practice and learning developed into new or varied practice, then, a complex picture emerged. There were systemic conditions that provided a need to initiate new projects and developments, and there was pupil energy to do new things and develop new projects, and there were adjustments and facilitations that the teacher made to suit the needs of the pupils, school and curriculum.

There are two important implications that should be raised.

First, these kinds of leadership seemed skilled, sophisticated and rooted in experience. But they might also be particular to some curricular areas – SDE in this case – rather than generic to other areas where PR might be gained, or to promoted posts. Therefore, an earlier conclusion (above) that PR would speak of generic leadership skills in promotion rounds or job applications might be worth revisiting. In explaining PR to the profession, it is straightforward to highlight the different areas of knowledge and skill associated with PR for, say 'Assessment' or 'Additional Support Needs'. But there might also be complex forms of commitment, knowledge and skill that are also worth investigating.

The second implication worth highlighting is that the conditions and energies that affect practice in SDE, and which were described in this section, perhaps ask teachers, pupils and management to continually ask 'what's next?' or 'what have we not done?' It would be worth investigating whether this displaces reflection about the merits of what has been done or how it might be improved.

In both cases, though, more data, possibly of a different kind, would be needed to unpack the complex relationships circulating around the reflections and practices of these teachers.

## Teachers' reflections, practices and personal commitments

I don't think I'm an activist. I wouldn't stand up with a placard or anything like that. I believe quite strongly in looking after our world, but I don't think I'd go on a demonstration or anything like that.

Primary School Teacher (F)

If PR is to be associated with a 'transformative profession' in the context of SDE, this probably ultimately refers to changing societal norms to more sustainable ones.

It seems relevant therefore to explore any relationship between the teachers' personal commitments and their work in SDE. In the application forms, **few applicants (6/22) suggested that their practice in SDE was initiated or informed by personal interest or belief**. This is an interesting finding in the context of *professional* recognition in an area of pedagogy that has often been associated with the professional's *personal* commitments. It might also be explained by the programmatic approach to SDE (in this case *Eco-Schools*) that informs so many of the applications – one that, in some ways, is independent of the personal commitments of the teacher.

The value of the application forms as a data source on this subject was limited. However the matter could be addressed more carefully in focus groups/interviews.

In focus groups/interviews, a few participants highlighted the word 'activism' when asked to consider words (from a list provided) that characterized them in relation to other teachers. For most of the focus group/interview participants, **'activism' was interpreted as referring to their role provoking action in the school, but they acknowledged that their own personal commitments to green issues were relevant**.

Yet these were often the teachers who introduced *Eco-Schools* and green issues into their schools, or were the ones who suggested ideas and guided others to be involved, or discovered that when their own influence was removed projects tended to lapse. Nearly all thought that they had some long-standing 'interest' in environmental issues. The few who had direct links with the (non-educational) green movement tended to characterize these as mixtures of personal commitments that they would have held regardless of being teachers, and/or as sources of practical value (as a network of resources) to their role as teachers.

## Professional Learning

The application form requested an account of a process of self-study, which typically included reading lists and CPD courses attended. The 'total instances' column in Table 4 is an account of the total learning effort made by the applicants collectively.

It demonstrates that the PR process **recognizes substantial amounts of study by all the applicants**. Between 22 applicants, there were 100 attendances at

CPD courses and 87 readings of publications (though some of the CPD courses, and many of the readings, were the same across applicants).

**Table 4 Professional Learning**

**Total number of instances of each category of learning (across 22 applications) and number of applications that mentioned each category (/22).**

(Note that this table shows both the sum *total* of all claimed instances of reading or attendance or discussions, as well as the count of the number of applications that referred to a category (recorded once per application, regardless of how many times the category was mentioned in that application). Discussions with teachers in the applicant's school were so universally referred to that they are not recorded here, so informal discussions are divided into those with non-teachers and those with teachers external to the applicant's school.

	Total Instances	Applications
Publications read	87	19
CPD courses attended (as learner)	100	22
Informal discussions (excluding teachers)	16	8
Informal discussions (external teachers)	9	8

**Compared to focus group/interview data, the application forms referred less to learning from informal contacts, networks and the Internet.** This might be because the application process was evidence-driven. Or it might be because applicants' concept of professional learning was conditioned by the understanding that teachers are employed as learners (Scottish Executive, 2001, Kennedy et al., 2008) and are provided with formal learning opportunities accordingly. Either case reinforces the point that PR is embedded in wider policy narratives.

A following section will discuss the possibility that the relationship between networks and professional learning might be central to the development of a recognition system that has profession-wide benefits. If this is the case, then what is revealed above is that the application process could encourage a wider view of what constitutes professional learning.

### **Professional recognition, leadership and spreading practice (in School)**

I seem to influence people whether they want it or not [laughs]  
Primary Head Teacher (G)

Previous sections have discussed the complexities of teachers' roles in the leadership of SDE projects. However PR potentially offers the possibility of identifying leaders for the profession, whose expertise in SDE could be used to develop SDE more widely. The question of influence is therefore important and was interrogated in the study.

In the application forms, the applicants' **influence in the school (and parent/carer) community was universally established as being very significant.** All the application forms suggested that the applicants had a motivating and leading effect within these communities, and in many cases this was directly corroborated in the application by the applicants' line-managers.



Two of the focus group/interview participants had themselves become head teachers since they began applying for recognition.

Asked about this in focus groups/interviews, participants acknowledged that they were understood to be the ‘go to’ person in the school. In addition, ‘influence’ was one of the most frequently raised words when focus group/interview participants were asked to choose (from a list provided) words that might distinguish them from other teachers. There was a sense that leading and motivating in the school were either: associated with the kinds of accomplishment under discussion (and it was noted that *Eco-Schools* expected the lead coordinator to spread involvement so that it was not down to a single individual); or they were skills that had been acquired and developed through involvement in the area.

### Professional recognition, leadership and spreading practice (beyond School)

The issue of influence beyond the school was investigated, in the application forms, using four proxy categories for active engagement that suggested influence beyond the school community, and these are shown in Table 5. The pattern is dependent on some analytical restrictions<sup>11</sup> but is nonetheless striking. **While the majority of applicants were influencing institutions beyond their own school communities, only a small minority was also doing so beyond their local authority.**

Table 5 Categories of influence

**Number of applications (/22) that mention the category of influence least once<sup>12</sup>**  
(Categories are designed to capture the applicants’ influence, so do not include simple *involvement* in cluster work, for example, but a sense of leading it).

Advises other local schools	15
Advises beyond local authority	3
Applied for funds for projects	3
Involves media outlets	3

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<sup>11</sup> The *Eco-Schools* model application referred to the use of the local media to publicize *Eco-Schools*, however this was not recorded here unless it was at least an ‘agreed action’, or mentioned in other parts of the application. It is possible that the reality of media use is therefore under-reported, but this is not known.

<sup>12</sup> The categories related to: (1) whether the teacher offered assistance to other local teachers or institutions (i.e. behaved as a ‘recognized expert’ beyond the school community) – an example would be delivering CPD to a local school; (2) whether the teacher offered assistance ‘nationally’ (as above but generally beyond the teacher’s local authority area) – an example would be the development of resources for *Learning and Teaching Scotland* (Scotland’s curriculum support body, now called *Education Scotland*). (3) whether the teacher sought funding from external institutions as part of their SDE work – an example would be an *RBS* grant to fund a school grounds project (internal fundraising, e.g. by school fairs, was excluded) (4) whether the teacher attempted to use local or wider media in order to highlight the school’s SDE work;

In contrast, **those who participated in focus groups/interviews were all connected and influential beyond their own local authorities.** It is possible that these teachers' willingness to participate in focus groups/interviews auto-correlates with their propensity to engage more widely within and beyond the profession.<sup>13</sup> They referred to connections and secondments with *Learning and Teaching Scotland*, science centres, and a range of national NGOs, education providers and businesses.

When the focus group/interview participants were asked to characterize themselves in relation to other teachers, the word that was raised most (from a provided list) was 'networks', and on several occasions it was raised before the question was asked.

Discussion of networks in focus groups/interviews raised a series of points, as follows. Networks could be carried from school to school and were a source of fresh ideas and resources. They were connected to leadership and spreading responsibility for SDE: leaders could delegate projects more easily if they were able to provide helpful contacts to the delegated teachers, who were new to SDE. Participation in wider programmes, such as *Forest School*, and especially *Eco-Schools*, made participants aware of individuals and organizations outside the school.

### **There was a possible relationship between professional learning and networking:**

I know a lot of people in that area. I know who to phone if I need somebody for a certain thing. Or I can email so-and-so. A lot of people say 'I'm doing this project on composting – how do I go about it?' kind of thing, and I know who to put people in touch with... [Interviewer: How come?]... Just because I've been on a lot of courses, spoken to people on courses. I've met a lot people because I've invited visitors into the school and because I've gone out and done some PD [Professional Development] for other people as well.

F: Primary school teacher (F)

Such a relationship between networking and professional learning potentially links PR (as a means of focusing professional learning) with the idea that PR might have wider benefits for the profession. This is probably worth further exploration. What this section suggests is that the teacher who has achieved PR in SDE is a very significant professional resource *because* their professional learning (which is what was facilitated and recognized) is so closely connected to their professional networks and influence. An account of PR that underestimates or understates this for school managers and fellow professionals might result in a loss of value to the profession.

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<sup>13</sup> However it is also possible that other applicants, if they had participated in focus groups/interviews, would have revealed more extensive networking activity than was shown on their application forms.

## Findings about pupil outcomes

The background section of this report mentioned that recent policy developments in Scottish teacher education have suggested that teacher education (including, presumably, through PR) should be judged against outcomes for pupils.

This was one reason why it was appropriate to investigate, with teachers who had achieved PR for SDE, what and how they claimed to know about outcomes for pupils. A second reason was that in SDE this has been difficult to research and the project was an opportunity to collect data from leading teachers in the field.

### Intended outcomes for pupils

The application forms offered little about outcomes for pupils because they focused on the teacher's learning. Focus groups/interviews were more revealing but this was a relatively small sample of teachers from which to develop pupil outcome information.

The teachers' accounts of outcomes were not directly couched in terms of pupils' 'green' values or attitudes, which they acknowledged were difficult to investigate. Instead the discussion of intended outcomes took the following forms.

Although the personal commitments of the focus group/interview participants to the field of SDE have been established (above), in their professional talk about the intended outcomes and purposes of SDE projects, **outcomes were not exclusively, or even principally, about sustainable development**. Indeed in some accounts, intended and unintended outcomes, SDE outcomes and unrelated outcomes, and basic social and learning-skills outcomes, were all mixed together:

There was quite a lot of positive comments that came from parent/carers about how they thought their children had changed ... just their attitude towards the local woodlands and the environment and one of the things they said as well which was an unforeseen benefit was saying that a girl will now work with boys. She never liked boys before but because of the way we grouped them... she doesn't avoid boys any more.

Primary school teacher (A)

It was clear that **SDE projects were closely related to wider school purposes** in most cases. Several of the focus group/interview participants discussed cross-curricular links. There was a strong sense that SDE projects were valuable in allowing teachers to work on many aspects of the official curriculum:

I can get all areas of the curriculum in there. All their learning, for school, you know we can get literacy, maths, health and wellbeing, there's all sorts. I can use it – [pause] – If you can use that [SDE project] for a writing lesson, or whatever, that's going to be far more meaningful to them than just plucking a topic out of mid air and saying 'right let's write an essay or a story on such and such', whereas if it's something they've gone out and experienced, you know, why not just use that? To me it's a no-brainer.

Primary School Head Teacher (G)

The application forms frequently claimed an important relationship between *Eco-Schools* and *Health Promoting Schools*. In another case the *Eco-School* work dovetailed with a *Go4SET*<sup>14</sup> project, an *Engineering Development Trust* initiative where the intention was to stimulate the interest of young people in science, technology, engineering and mathematics (STEM) for subsequent course choices and careers. Pupils designed models of eco-friendly classrooms in that project. One teacher in a focus group noted that sustainability was a helpful context for an international school link with a school in Malawi.

**Many outcomes raised were general social or learning outcomes**, such as teamwork skills, learning skills or pupil confidence. One teacher in a focus group said that she had become interested in the general SDE area because she had witnessed the growth of pupil and school pride that had occurred after a school grounds development project. (It was not clear whether that pride was pride about feelings of 'greenness', or of team achievement in general). Similarly, a special school Head Teacher argued that SDE and *Eco-Schools* activities were particularly helpful in the special school sector because of the kinds of empowerment associated with the development of life skills, community participation and making a difference to others. And another teacher said that projects that deploy 'pester power' to involve parents/carers, and to affect family behaviour in green ways, were in part attractive for the more general reason of involving parents/carers in their children's learning, regardless of what the learning was about.

Finally, winning Green Flag status and highlighting the school's work on TV or in the media – as benefits to the school's status – were also mentioned as being of some importance in themselves.

The 'outcomes' of 'SDE' projects then, were clearly mixed and this possibly militated against a strong focus on the evaluation of SDE-specific outcomes concerning pupils' attitudes.

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<sup>14</sup> <http://www.go4set.org.uk/>, accessed 3 August 2011

### Knowledge of deeper and SDE-specific outcomes for pupils

Again the application forms revealed little about this area. In the focus groups/interviews, participants were asked directly how they could know what effects their practice was having on children, including their attitudes and behaviours in relation to SD. This was investigated in some depth.

**Formal monitoring was a common means of examining the outcomes** of projects in general, whether or not this pertained to deeper affects on pupils.

Weigh litter. Weigh the paper that's recycled. And graphs made for that weekly.

Primary School Teacher (B)

This quotation captured a collective recognition of the clockwork that is evaluation and monitoring for *Eco-Schools*. A 'new layer' of monitoring and evaluation attended progress towards each new green flag. In another case, *Forest School* Training Level 3 involved the teacher (the prospective Forest School leader) in a range of academic writing for which she was also to collect questionnaire data from parents about pupil attitudes. Such formal methods, like questionnaires and surveys, including those set as homework tasks, were often used for other projects as well.

Many of these collected baseline information (such as volumes of recycling, counts of lights left burning or electrical items left on stand-by) against which changes in the pupils' environment or collective behaviour could be monitored. And the pupils themselves monitored these as part of the pedagogy.

These sources of information were mixed with less formal evaluations. This might be the result of a developing culture of formative assessment and professional reflection in teaching in Scotland and elsewhere:

So the pupils had done written little evaluations about their projects and I asked for parent feedback as well about what their children were coming home to discuss.

Primary School Teacher (B)

**Pupil outcomes were often articulated in terms of changes to their environment or to their collective behaviour, rather than direct investigation of individual behaviour or attitudes.** In addition to the kinds of monitoring of school or home behaviour described above, several of the focus group/interview participants hypothesised that their pupils had developed a sense of ownership of school grounds projects so that, as these pupils left primary school, over the years there had been a reduction in previous levels of vandalism of the primary school grounds by older children:

Now we're about six years into *Eco-Schools* and nothing [in the school grounds] is now getting vandalised to the same extent as it was. And I don't know if it's because the teenagers who are around the local area now were part of the development of the land and the area.

Primary School Teacher (B)

However in another case a primary *Forest School* programme was in part intended to result in teenage respect for the local woodlands, but there was little measureable (or measured) improvement, at least in terms of litter, despite questionnaire evidence from parents/carers that pupils had new respect for the woodlands.

Of course, these are not mutually exclusive findings. The relationships between educational interventions and such longer-term outcomes are complex. Indeed one teacher noted that it was good for pupils to understand that fact. Another observed that they had no choice but to address this complexity when their flyer campaigns appeared to produce no observable change in local community behaviour.

**Pupils' home lives appeared to be affected by the projects**, suggesting that pupils were behaving as agents of SD. This has been noted by other research.

The parent-/carer-pupil relationship was clearly targeted with some success:

The children are taking the messages home about recycling paper properly or gathering the plastic and making sure that that's taken to the recycling bank in the village. They're pressuring their parents. And we've ran energy campaigns where again they've sent out questionnaires beforehand about things that they maybe did in the house. Then they did their campaign – they wrote leaflets they wrote flyers, posters. We then went through the same process about six months later and sent out another questionnaire to see if they had changed their ways. A lot of them had.

Primary School Teacher (B)

There were also less-targeted (and less-measured) effects on family life. Parents/carers would unexpectedly refer to their children's insistence on green behaviours at home:

At parents' night they'll come in and say 'is it you that makes us recycle?' So the kids are taking it home.

Primary School Teacher (F)

Again there are counter-examples, though fewer of these were offered. One project was looking at greener means of getting to school because of the collapse of the 'Walking Bus' due to lack of parent/carers interest. This suggested that those pupils were not automatically inducing green family behaviour in that particular situation. Moreover, in some cases parents/carers were directly invited to participate in the green agenda of the school, and often accepted the invitation enthusiastically, so that not all green family behaviour could be attributed to changes in pupils' attitudes and agency.

**The fact that pupils were often evangelical or self-directing said something about effects on their attitudes and behaviours** according to the teachers.

Most of the focus group/interview participants mentioned pupils' self-direction, enthusiasm or evangelism as a line of evidence pertaining to their attitudes and understanding:

When we had our One Planet Picnic, without any prompting they were looking at how much waste are we making, what can we do with the waste, what can we compost, and looking at that.

Primary School Teacher (H)

Sometimes they pick you up. That's how you know the best, because they pick you up – [they say to you] 'are you leaving that computer on when you go out; are you switching off those lights?'

Primary School Teacher (F)

The question of precisely what was 'known' from such an exchange remained difficult to articulate however. A crude behavioural response by pupils, even allied to a pupil explanation of why the light-switching-off behaviour matters, is rarely cited as the intended outcome of SDE. And yet it might be difficult to distinguish from a deep concern with climate change. Teachers recognized this kind of evaluative difficulty.

**Informal discussions with pupils revealed evidence of effects on their behaviours and attitudes** according to all the focus group/interview participants. These discussions might be incidental or might be associated with a specific project. In addition to asserting that the children's awareness had been affected, several participants offered anecdotes in which children had initiated these discussions. Although a few noted that it was impossible to really know what was happening 'inside a child's head', as it were, this connection between pupil initiation and revealing discussion was perhaps the most consistent and convincing evidence of effects on pupils attitudes or values in relation to SD:

I think it's the questioning you have with the children when you actually assess their understanding of Eco. And what it means. Well in [school name] itself the children were very proactive in what they wanted to do and they took things forward themselves and they would see areas for development or they would see where there was weaknesses and wanted to make suggestions, and special events that they wanted to do. Like for example they wanted to come all dressed up in recycled clothes. So it was all very, very child centred and I think that was one of the real things that made you see that they really did take on board what was being said.

Primary School Head Teacher (D)

To a greater or lesser extent, though, all of these lines of evidence were undermined by the fact that it was much less clear how long-lasting were these pupil outcomes. This challenge was not simply that of the longevity of the outcome, but of the logical correlate that the outcome itself was possibly

sustained by extrinsic factors, rather than by pupil convictions, and also of the difficulty of being able to tell the difference.

There was little evidence on the subject. In most of the focus groups/interviews **there was uncertainty about whether individual outcomes were long-lasting.**

It was raising their awareness. How long that then stays with them once they're away from here and up into the high school and things, I'm not sure.

Primary school teacher (H)

Where the teachers encountered pupils who had left the school and were now older, the subject of their interest in matters of SD was rarely raised. In one instance, a planned link with the local high school meant that leaving children could join the Eco Committee there and then return to assist younger primary school children with an adopt-a-beach project. Another teacher was unsure whether former-pupils' attitudes and behaviours had carried on, but it was clear that they remained interested in developments in the primary school itself.

However the only secondary school teacher involved in the focus groups/interviews was particularly unsure about this issue. Her independent school was an interesting case because it was a single institution that took pupils from nursery through to secondary. Sustainable development education projects had been delivered throughout all of those stages, and for several years. And yet it was still necessary to constantly reinforce minor behaviour changes (such as using recycling bins) in the secondary years. And on a slightly different note, she reported a tendency for pupil allegiance to shift (though perhaps superficially):

Trying to get a group to meet up and be Eco Warriors in the Senior School – it is not cool... They are really proud that we have the green flags. But they are really proud that someone else would have to do it, they wouldn't have to do it themselves... But then again there are so many different things that could be *Eco-Schools* that they do, like *Mercy Corps – Global Citizenship Group*, and their doing *DofE*.<sup>15</sup> Sometimes I don't think the pupils realise all the different things they are doing that are *Eco-Schools* [related].

Secondary School Teacher (C)

The teachers were aware of course that **school alone does not necessarily determine pupils' attitudes and behaviours.** Several noted that differences in parental attitudes were significant, although pupils were capable of taking responsibility for changing them. Context mattered, for example in a remote, rural area, where some of the school's pupils were from estate-workers' families. These pupils brought a direct interest in the environment to school that would condition their interest and participation in *Eco-Schools* or other SD projects:

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<sup>15</sup> Duke of Edinburgh's Award Scheme, <http://www.dofe.org/>, accessed 21 October 2011



My two older boys last year would go fishing and they would talk about line that they found on the riverside, and bringing it in, and how that had then hurt something – so they would come back in and tell you.

Primary school teacher (H)

One primary Head Teacher's son, who had been very involved in SDE at primary school, and who still recycled at home, wanted to have nothing to do with it at secondary school. She wondered, more generally, whether her pupils' enthusiasm for green projects was in some way a reflection of her own enthusiasm, and perhaps dependent upon it.

The answers to those kinds of question were unknown despite the fact that it seemed likely that this group of teachers could go about investigating them. However the practice-relevant windows on outcomes for pupils that they *did* deal with were those described above.

## Recommendations

This small-scale study has investigated the new PR system and has done so in the context of SDE. Although the study was exploratory and limited in scope, it has been possible to identify a series of recommendations for the further development of PR and for further research that might assist with that. In addition, this particular group of people is of interest to the SDE sector and new avenues for research in that area have emerged.

It is suggested that the GTCS should:

1. Fine-tune the concept of PR and re-circulate/advertise it to the profession. In particular, its purposes and 'uses' could be expanded upon. These could be based on the experiences of teachers and managers who are just now beginning to work with PR:
  - PR could be understood as both a personal achievement and a contribution to the profession. Exposing the *relationship between* professional networks and professional learning might prove to be one way of articulating this relationship. This would more clearly identify the resource that is inherent in the professionally recognized teacher.
  - It would be worth carrying out a survey (or other research) with school managers, and teachers who have achieved PR, in order to generate understandings of how they are using it in school planning, recruitment and promotion processes. These understandings could be fed back to school managers and teachers as a way of further establishing the purposes of PR within the profession.
  - The application process could more fully recognize the professional learning that derives from networks, informal contacts and the Internet.
  - The application process could highlight the extent of an applicant's networks and influence, including beyond their Local Authority.
2. Highlight the particularities of each PR area for school managers, to improve the range of ways in which PR can be used to make a difference in schools and in the profession. In addition to SDE-specific knowledge and skills, this study identified generic-sounding skills (such as curriculum leadership and personal commitment). But the study suggested that these might be more SDE-specific than they seem:
  - It would be useful to research the differences between PR areas with a view to identifying the different suites of attributes and resources that the holder of PR in a given area is likely to be able to offer.
  - These suites could then be published (not as GTCS-assured competencies, or as criteria for PR, but perhaps as vignettes of what the teacher with PR in a given area might offer a school).

3. Consider mechanisms by which groups of teachers with PR in a given field, as a group, could innovate in that field and influence the profession as a whole.
4. Invite groups of teachers, who have achieved PR, to participate in the teacher-as-researcher programme.
  - The teachers have an already-proven ability to articulate practice, evaluate and monitor, because of their participation in the application process.
  - The teachers are influential, have network-based resources, and already run substantial, whole school, SDE programmes. They therefore have access to important 'test-beds' of SDE pedagogies.
  - Several of the teachers have, or are obtaining, other qualifications, including research-based qualifications. They have demonstrable personal and professional commitments to the field.
  - Suggested areas of research are offered below.

This study looked rather obliquely at the characteristics of the teachers in this SDE constituency, and they were heavily influenced by the *Eco-Schools* programme. But there was an encouraging level of consistency with other studies of effective SDE practice. Possible areas of future research work, to promote the field of SDE, include:

5. The nature of SDE leadership in schools.
  - Previous research has shown that individual 'leaders' are common in case studies of successful SDE development in schools.
  - This study suggests that the leadership role is complex and not easy to model. This remains under-examined and WWF Scotland and WWF UK have research interests in this area.
  - There is scope to explore these teachers' practices in more detail in order to better understand the relationship between SDE and schools, the dependency or otherwise on 'leaders', and to spread effective practice.
6. The difference in frequency of school grounds infrastructure SDE projects (which were relatively common, e.g. raised beds or food plots) and school buildings SDE infrastructure projects (which were less common, e.g. solar power). This difference was revealed in the application forms.
7. The evaluation of SDE-specific and 'deeper' pupil outcomes. This study suggested that these teachers were not fully evaluating – and have some reservations about – deeper or longer-term outcomes for pupil attitudes in relation to SD.

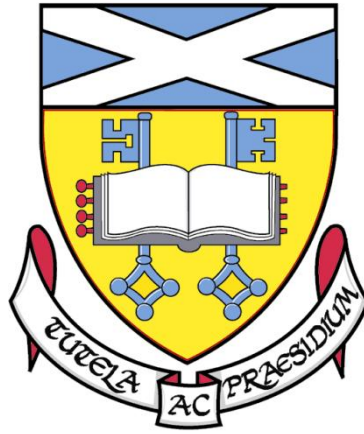
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# Application for Professional Recognition for Fully Registered Teachers

## Personal Details

Surname

Title

Dr / Mr / Mrs / Ms / Miss

Forename(s)

Gender

Male / Female

Registration Number

Address

Town

Postcode

Date of Birth

(DD/MM/YYYY)

Email Address

Sector

School

Local Authority

Headteacher

## Elements for Professional Recognition in a specific area of expertise in education

Areas in which a teacher can gain professional recognition:

(i) Specific areas of expertise

Curricular Areas	Core Aspects	Cross-Curricular Aspects
<ul style="list-style-type: none"><li>Mathematics</li><li>Language</li><li>Creative Arts<ul style="list-style-type: none"><li>Drama</li><li>Art</li><li>Music</li></ul></li><li>Physical Education</li><li>RME</li><li>Social/Environmental Studies</li><li>Science</li><li>Technology</li></ul>	Such as <ul style="list-style-type: none"><li>Literacy</li><li>Numeracy</li><li>ICT</li><li>Assessment</li><li>Supporting Pupil Learning</li><li>E-Literacy</li></ul>	Such as <ul style="list-style-type: none"><li>Enterprise in Education</li><li>Guidance</li><li>Health Promotion</li><li>Leadership</li><li>Mentoring</li><li>Sustainable Development Education</li></ul>

(ii) Stage-related Expertise

### Pre-Requisites

You must:

- (i) have gained full registration with the General Teaching Council for Scotland;
- (ii) have completed the equivalent of at least 2 years' teaching after gaining full registration.

### Gaining Professional Recognition

To gain professional recognition in a specific area of expertise you will be required to demonstrate:

(i) Enhanced knowledge of this topic/issue

You must demonstrate that you have developed your knowledge of the topic/issue, you are up-to-date with current thinking in the area and are able to translate this knowledge into enhanced learning opportunities for pupils.

(ii) Relevant professional knowledge

You already possess a sound knowledge of the principles of learning and teaching and apply these principles in your everyday work with pupils.

In addition to this, you will also be expected to demonstrate knowledge of current developments and thinking in relation to the topic/issue in which you wish to gain professional recognition and have translated this knowledge into relevant teaching and learning opportunities for your pupils.

(iii) Relevant professional skills and abilities

You must receive a recommendation from the school confirming that you have demonstrated enhanced professional skills and abilities as described in the Standard of Full Registration in your work with pupils.

Advice will be provided relating to the length of time a teacher should have been developing this area of expertise before being recommended for professional recognition.

(iv) Reflected on own learning and development

You will be expected to reflect your own learning and development and to discuss this with colleagues.

(v) Report and share knowledge and experiences with colleagues

You will be expected to develop curriculum materials and ideas that could be used by other teachers. You will therefore be required to show how you have shared your knowledge and experience with others.

## Verification of Professional Discussion Process

I confirm that:

- (i) a professional discussion took place to discuss the requirements and procedures for gaining professional recognition;

Date of Discussion	Professional Recognition Subject

- (ii) we discussed professional development in relation to the following key areas:

Subject/Content Knowledge	Agreed Action

Professional Knowledge	Agreed Action



Verification of Professional Discussion Process (continued)

(ii) we discussed professional development in relation to the following key areas:

Professional Experience	Agreed Action

Reflecting, Reporting/Sharing	Agreed Action

Headteacher/Authority Signature		Date	
Position			

## Subject/Content Knowledge

I confirm that I have completed the following programme of study and have attached evidence of successful completion:

CPD Completed	Provider	Evidence of Completion	Date of Completion

## Professional Knowledge

CPD Completed	Provider	Evidence of Completion	Date of Completion

Verification of Professional Discussion

I confirm that a professional discussion took place to review the Application for Professional Recognition.

Summary of Professional Discussion

## Professional Experience

I confirm that:

- (i) the candidate has demonstrated that he/she can apply his/her teaching skills and abilities to

Candidate's Name	Subject

For example:

- planned coherent teaching programmes matched to the needs of pupils
- communicated clearly with pupils
- used a range of teaching strategies and resources
- set and maintained expectations for pupils
- working co-operatively with other professionals
- organised and managed activities/pupils effectively
- applied appropriate assessment, recording and reporting procedures
- used assessment results to improve his/her teaching and attainment of pupils


## Reflect/Report/Share Expertise

CPD Completed	Provider	Evidence of Completion	Date of Completion

Application

I confirm my application for Professional Recognition.

I understand that GTC Scotland may request a copy of my supporting evidence and such evidence will be provided when requested.

I acknowledge that this evidence will be retained by GTC Scotland.

Teacher Signature	<div></div>	Date	<div></div>
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I confirm my recommendation for professional recognition in the above area of expertise.

Headteacher/Authority Signature	<div></div>	Date	<div></div>
Position	<div></div>		<div></div>